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EXAMINER	
COSIMANO, EDWARD R	
ART UNIT	PAPER NUMBER
2863	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/542,007	BROGARDH, TORGNY	
	Examiner	Art Unit	
	Edward R. Cosimano	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16,18-21 and 23-38* is/are pending in the application.

4a) Of the above claim(s) *none* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,18-21 and 23-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The Oath/Declaration and replacement Abstract as filed on 11 July 2005 are acceptable to the examiner.

2. Acknowledgment is made of applicant's claim for foreign priority based on an application number SE 0300409-0 filed in Sweden on 13 February 2003. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

3. The set of drawings containing figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 14, 15a, 15b, 16, 17 & 18 as presented in the set of drawings filed on 05 December 2006 are acceptable to the examiner.

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4.1 Claims 1, 3-16, 18, 37 & 38 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

4.1.1 It is noted that the disclosure presents a disclosed utility for the invention of:

> A) process/method claims 1, 3-16 & 37 as a process/method comprising a sequence of steps/functions/actions that when take as a whole provide the useful function of "generating a series of more accurate data points that are to be used to by a control program for a robot so as to control the movements of the robot while performing a task/function on an object"; and
>
> B) manufacture/article/item claims 18 & 38 as a manufacture defined by the characteristics/features/components of the manufacture/article that when take as a whole define the manufacture to provide the useful function of "generating a series of more accurate data points that are to be used to by a control program for a robot so as to control the movements of the robot while performing a task/function on an object".

4.1.2 It is further noted that as recited:

> A) claims 1, 3-16 & 37 when take as a whole are directed to a process/method that is intended to achieve the claimed utility of "generating a series of more accurate data points that are to be used to by a control program for a robot"; and

B) claims 18 & 38 when take as a whole are directed to a manufacture/article/item that is intended to achieve the claimed utility of "generating a series of more accurate data points that are to be used to by a control program for a robot".

4.1.3 In regard to each of the pending claims while taking each claim as a whole and interpreting the claims as the claims could reasonably be interpreted by one of ordinary skill at the time the invention was made as guided by the written description, it is noted that one of ordinary skill at the time of the invention could reasonably make the following observations in regard to the interpretation of each of the pending claims.

4.1.3.1 In regard to the recited utility of independent/base claims 1, 18, 37 & 38, it is noted that these claims recite an intended field of utility for the invention recited as a method in claims 1 & 37 and a manufacture in claims 18 & 38 of "generating a series of more accurate data points that are to be used to by a control program for a robot".

4.1.3.2 In regard to the limitations of independent/base claim 1, it is noted that:

A) the first action performed as recited in process claim 1 is deemed to be directed to nothing more than an act for performing the data/information gathering/processing function of "using an unspecified machine/process to produce more than one measuring point for an unspecified object where the each measuring point is defined using an unspecified type of co-ordinate system associated with a robot, WHERE THE MEASURING POINT IS NOT ASSOCIATED WITH A DEFINED POSITION ON THE OBJECT", since as recited the data/information that is gathered/produced by the performing the recited function is positively recited as either: (1) being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; or (2) not being processed/gathered by any specific machine or process that would perform any other function beyond the act/function recited as data/information gathering/processing.

B) the second action performed as recited in process claim 1 is deemed to be directed to nothing more than an act for performing the data/information gathering/processing function of "using an unspecified machine/process to produce more than one characteristic for more than one part of a model of an unspecified object based on a geometric model of an unspecified object, WHERE THE CHARACTERISTICS OF

THE OBJECT ARE NOT RELATED TO THE DEFINED POSITIONS OF THE OBJECT", since as recited the data/information that is gathered/produced by the performing the recited function is positively recited as either: (1) being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; or (2) not being processed/gathered by any specific machine or process that would perform any other function beyond the act/function recited as data/information gathering/processing.

C) the third action performed as recited in process claim 1 is deemed to be directed to nothing more than an act for performing the data/information gathering/processing function of "using an unspecified machine/process to determine the orientation and position of the geometric model relative to the unspecified type of co-ordinate system associated with a robot by adapting the corresponding points on parts of the geometric model to the measuring points produced by the first action", since as recited the data/information that is gathered/produced by the performing the recited function is positively recited as either: (1) being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; or (2) not being processed/gathered by any specific machine or process that would perform any other function beyond the act/function recited as data/information gathering/processing.

D) the fourth action performed as recited in process claim 1 is deemed to be directed to nothing more than an act for performing the data/information gathering/processing function of "using an unspecified machine/process to determine the part of the object a measuring point belongs based on the characteristic determined by the second action", since as recited the data/information that is gathered/produced by the performing the recited function is positively recited as either: (1) being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; or (2) not being processed/gathered by any specific machine or process that would perform any other function beyond the act/function recited as data/information gathering/processing.

E) the fifth action performed as recited in process claim 1 is deemed to be directed to nothing more than an act for performing the data/information gathering/processing function of "using an unspecified machine/process to determine the deviation/difference between at least one measuring point on the object as produced by the first action and the corresponding point on the geometric model", since as recited the data/information that is gathered/produced by the performing the recited function is positively recited as either: (1) being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; or (2) not being processed/gathered by any specific machine or process that would perform any other function beyond the act/function recited as data/information gathering/processing.

F) the sixth action performed as recited in process claim 1 is deemed to be directed to nothing more than an act for performing the data/information gathering/processing function of "using an unspecified machine/process to determine an adjustment to the "defined positions on the object" based on the deviations determined by the fifth action", since as recited the data/information that is gathered/produced by the performing the recited function is positively recited as either: (1) being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; or (2) not being processed/gathered by any specific machine or process that would perform any other function beyond the act/function recited as data/information gathering/processing.

G) the seventh action performed as recited in process claim 1 is deemed to be directed to nothing more than an act for performing the data/information gathering/processing function of "using an unspecified machine/process to provide the data/information produced by the sixth action to the control system of the robot but with out a positive requirement that the control system of the robot use the data/information produced by the sixth action in any manner such as to control the robot", since as recited the data/information that is gathered/produced by the performing the recited function is positively recited as: (1) not being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited

invention; and (2) not being processed/gathered by any specific machine or process that would perform any other function beyond the act/function recited as data/information gathering/processing. In regard to the data/information produced by this action because the control system of the robot is not required to use the data/information produced by the claimed invention, then one of ordinary skill at the time the invention was made would recognize this data/information as this data/information as "non-functional descriptive material".

Hence, one of ordinary skill at the time the invention was made could interpreted claim 1 when taken as a whole as being directed to nothing more than a machine/process for the manipulation of data/information with out a claimed application of the results of the manipulation or claimed requirement that any of the recited structure or acts/functions are present or performed for any purpose not related to the manipulation of data/information.

4.1.3.3 The subject matter recited as dependent claims 3, 5, 10, 11, 12, 14, 15 & 16 is deemed to be directed to nonfunctional descriptive material that does not go beyond merely defining the nature/source of the recited data/information that is to be used when performing the recited processing and hence does not alter the statutory nature of the invention recited as the invention in the base claims.

4.1.3.4 The subject matter recited as dependent claim 4, 7, 8, 9 & 13 is deemed to be directed to both: (A) nonfunctional descriptive material that does not go beyond merely defining the nature/source of the recited data/information that is to be used when performing the recited processing; and (B) functional descriptive material that does not go beyond defining the nature of the steps/functions/actions that are used when performing the recited processing or gathering of data/information, and hence does not alter the statutory nature of the invention recited as the invention in the base claims.

4.1.3.5 The subject matter recited as dependent claim 6 is deemed to be directed to functional descriptive material that does not go beyond defining the nature of the steps/functions/actions that are used when performing the recited processing or gathering of data/information and hence does not alter the statutory nature of the invention recited as the invention in the base claims.

4.1.3.6 In regard to the implied motion of the robot as recited in claims 11-16, since it is noted that these claims do not require the "surface scanning program" to be related to the generation of

the "control program" produced by the base claim, these claims are deem to be directed to actions that do not go beyond the actions of data gathering actions.

4.1.3.7 In regard to the limitations of independent/base claim 18, it is noted that:

A) the structure recited in manufacture/article claim 18 is deemed to be directed to nothing more than a structure of a memory that has the characteristic feature of containing a program as "non-functional descriptive material" that is intended to perform a data/information gathering/processing functions recited in the process of claim 1, since as one of ordinary skill at the time the invention was made would recognize the recited invention lacks any structure that could implement the program so as to provide a concrete and tangible practical and substantial credible utility because the recited "computer readable media" can not by itself realize the function of the recited program.

Hence, one of ordinary skill at the time the invention was made could interpreted claim 18 when taken as a whole as being directed to nothing more than a manufacture/article that is intended to be a machine/process for the manipulation of data/information with out a claimed application of the results of the manipulation or claimed requirement that any of the recited structure or acts/functions are present or performed for any purpose not related to the manipulation of data/information.

4.1.3.8 In regard to the limitations of independent/base claim 37, it is noted that:

A) the first action performed as recited in process claim 37 is deemed to be directed to nothing more than an act for performing the data/information gathering/processing function of "using an unspecified machine/process to produce more than one measuring point for an unspecified object where the each measuring point is defined using an unspecified type of co-ordinate system associated with a robot, WHERE THE MEASURING POINT IS NOT ASSOCIATED WITH A DEFINED POSITION ON THE OBJECT", since as recited the data/information that is gathered/produced by the performing the recited function is positively recited as either: (1) being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; or (2) not being processed/gathered by any specific machine or process that would perform any other function beyond the act/function recited as data/information gathering/processing.

B) the second and third actions performed as recited in process claim 37 are deemed to be directed to nothing more than an act for performing the data/information gathering/processing function of "using an unspecified machine/process to produce more than one characteristic for more than one part of a model of an unspecified object based on a geometric model of an unspecified object, WHERE THE CHARACTERISTICS OF THE OBJECT ARE NOT RELATED TO THE DEFINED POSITIONS OF THE OBJECT", since as recited the data/information that is gathered/produced by the performing the recited function is positively recited as either: (1) being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; or (2) not being processed/gathered by any specific machine or process that would perform any other function beyond the act/function recited as data/information gathering/processing.

C) the fourth action performed as recited in process claim 37 is deemed to be directed to nothing more than an act for performing the data/information gathering/processing function of "using an unspecified machine/process to determine the part of the object a measuring point belongs based on the characteristic determined by the second and third actions", since as recited the data/information that is gathered/produced by the performing the recited function is positively recited as either: (1) being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; or (2) not being processed/gathered by any specific machine or process that would perform any other function beyond the act/function recited as data/information gathering/processing.

D) the fifth action performed as recited in process claim 37 is deemed to be directed to nothing more than an act for performing the data/information gathering/processing function of "using an unspecified machine/process to determine the orientation and position of the geometric model relative to the unspecified type of co-ordinate system associated with a robot by adapting the corresponding points on parts of the geometric model to the measuring points produced by the first action", since as recited the data/information that is gathered/produced by the performing the recited function is positively recited as either: (1) being provided as input for use by latter

processing that is positively recited as being performed either internally or externally of the recited invention; or (2) not being processed/gathered by any specific machine or process that would perform any other function beyond the act/function recited as data/information gathering/processing.

E) the sixth action performed as recited in process claim 37 is deemed to be directed to nothing more than an act for performing the data/information gathering/processing function of "using an unspecified machine/process to determine the deviation/difference between at least one measuring point on the object as produced by the first action and the corresponding point on the geometric model", since as recited the data/information that is gathered/produced by the performing the recited function is positively recited as either: (1) being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; or (2) not being processed/gathered by any specific machine or process that would perform any other function beyond the act/function recited as data/information gathering/processing.

F) the seventh action performed as recited in process claim 37 is deemed to be directed to nothing more than an act for performing the data/information gathering/processing function of "using an unspecified machine/process to determine an adjustment to the "defined positions on the object" based on the deviations determined by the sixth action", since as recited the data/information that is gathered/produced by the performing the recited function is positively recited as either: (1) being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; or (2) not being processed/gathered by any specific machine or process that would perform any other function beyond the act/function recited as data/information gathering/processing.

G) the eighth action performed as recited in process claim 37 is deemed to be directed to nothing more than an act for performing the data/information gathering/processing function of "using an unspecified machine/process to provide the data/information produced by the sixth action to the control system of the robot but with out a positive requirement that the control system of the robot use the data/information

produced by the sixth action in any manner such as to control the robot", since as recited the data/information that is gathered/produced by the performing the recited function is positively recited as: (1) not being provided as input for use by latter processing that is positively recited as being performed either internally or externally of the recited invention; and (2) not being processed/gathered by any specific machine or process that would perform any other function beyond the act/function recited as data/information gathering/processing. In regard to the data/information produced by this action because the control system of the robot is not required to use the data/information produced by the claimed invention, then one of ordinary skill at the time the invention was made would recognize this data/information as this data/information as "non-functional descriptive material".

Hence, one of ordinary skill at the time the invention was made could interpreted claim 37 when taken as a whole as being directed to nothing more than a machine/process for the manipulation of data/information with out a claimed application of the results of the manipulation or claimed requirement that any of the recited structure or acts/functions are present or performed for any purpose not related to the manipulation of data/information.

4.1.3.9 In regard to the limitations of independent/base claim 38, it is noted that:

A) the structure recited in manufacture/article claim 38 is deemed to be directed to nothing more than a structure of a memory that has the characteristic feature of containing a program as "non-functional descriptive material" that is intended to perform a data/information gathering/processing functions recited in the process of claim 37, since as one of ordinary skill at the time the invention was made would recognize the recited invention lacks any structure that could implement the program so as to provide a concrete and tangible practical and substantial credible utility because the recited "computer readable media" can not by itself realize the function of the recited program.

Hence, one of ordinary skill at the time the invention was made could interpreted claim 38 when taken as a whole as being directed to nothing more than a manufacture/article that is intended to be a machine/process for the manipulation of data/information with out a claimed application of the results of the manipulation or claimed requirement that any of the recited structure or

acts/functions are present or performed for any purpose not related to the manipulation of data/information.

4.1.4 In view of the above characterization of claims 1, 3-16, 18, 37 & 38 it can clearly be seen that, as these claims would be reasonably interpreted by one of ordinary skill at the time the invention was made, as merely conveying to one of ordinary skill at the time the invention was made a description of an invention that does not go beyond the gathering and manipulation of data/information and therefor merely sets forth the abstract ideas of receiving and transforming data by processing/manipulating the data/information into other data/information, for example transforming numbers to numbers without:

A) requiring by explicitly reciting and achieving a claimed requirement that the results of the claimed invention be tangibly used in anyway by anyone or anything in order to achieve either:

(1) a concrete and tangible useful result; or

(2) a concrete and tangible useful practical application of either:

(1) the recited mathematical processing; or

(2) the resultant numbers/data produced by the claimed invention;

or

B) reciting and achieving a physical transformation of one thing into something else.

Such a claimed invention consisting solely of data collection and processing or manipulating data/information, whether it is drafted as a machine or process or manufacture no matter how useful the claimed invention may appear, is deemed to be directed to an attempt by applicant to patent an abstract idea of processing/manipulating data/information which would preempt all uses of the processing recited as the claimed invention and therefore as set forth by the Court the claimed invention is deemed to be directed to non-statutory subject matter, see either (A) DIAMOND v. DIEHR AND LUTTON, 209 USPQ 1 at 8 (US SupCT, 1981), citing GOTTSCHALK v BENSON ET AL, 175 USPQ 673 (US SupCT, 1972), and PARKER v FLOOK, 198 USPQ 193 (US SupCT, 1978), at pages 7-8; or (B) In re WARMERDAM, 31 USPQ2d 1745 at 1758-1759 (CAFC, 1994); or (C) STATE STREET BANK AND TRUST CO. v SIGNATURE FINANCIAL GROUP INC., 38 USPQ2d 1596 at 1602 (CAFC 1998); or (D) In

re RICHMAN, 195 USPQ 340 at 344 (CCPA 1977); or (E) In re MAUCORPS, 203 USPQ 812 @ 815-816 (CCPA 1979), citing both In re JOHNSON, 589 F.2d 1070, 1077, 200 USPQ 199, 206 (CCPA 1978), and In re FREEMAN, 573 F.2d at 1247, 197 USPQ at 472. Note also "Thus, a process consisting solely of mathematical operations, i.e., converting one set of numbers into another set of numbers, does not manipulate appropriate subject matter and thus cannot constitute a statutory process. In practical terms, claims define nonstatutory processes if they: – consist solely of mathematical operations without some claimed practical application (i.e., executing a "mathematical algorithm"); or – simply manipulate abstract ideas, e.g., a bid (Schrader, 22 F.3d at 293-94, 30 USPQ2d at 1458-59) or a bubble hierarchy (Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759), without some claimed practical application." MPEP 2106, 2106.01 & 2106.02.

4.2 Claims 18 & 38 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

4.2.1 In regard to claims 18 & 38, in addition to what is set forth above it is further noted that:

A) claim 18 & 38 are directed to a "program" or "code" or "instructions" per se as set forth by applicant in the preamble and hence these claims recite steps/functions/actions that when take as a whole do not define either a process, see MPEP 2106, 2106.01 & 2106.02, and In re CHATFIELD, 191 USPQ 730 @ 736 (CCPA 1976), or a machine, see In re ALAPPAT, 31 USPQ2d 1545 at 1558 (CAFC 1994);

B) claims 18 & 38 when take as a whole are directed to a program or process/method that does not achieve the claimed utility, see above, since as one of ordinary skill at the time the invention was made would recognize these claims fail to recite the structure that would be necessary to implement the functions of the recited "program" or "code" so as to achieve the disclosed and recited utility of the claimed invention.

4.2.2 In regard to each of the pending claims taking each claim as a whole and interpreting the claims as set forth above, one of ordinary skill at the time of the invention would make the following observations in regard each of the limitations of the claims:

A) in regard to the body of claims 18 & 38, as recited in these claims applicant has:

(1) set forth a "software program" or "code" or "a manufacture" in claims 18 & 38 comprising "computer program for" or "code for" or "instructions for" performing one or more functions/actions; and

(2) failed to set forth either (a) a specific machine that is operates in a specific manner by executing the recited "program" or "codes" so as to produce a new machine, see In re ALAPPAT, 31 USPQ2d 1545 at 1558 (CAFC 1994), or (b) a process of operating a machine to perform the recited functions of the "program" or "code", see In re CHATFIELD, 191 USPQ 730 @ 736 (CCPA 1976), and

B) neither (1) the data/information that represents either the "computer program for" or "code for" or "instructions for"; nor (2) the computer readable media or memory device alone, which applicant has recited as the claimed invention, can not produce a concretely and tangibly result that would be required for the recited functionality of the claimed invention.

Hence, as one of ordinary skill at the time the invention was made would recognize, the language of the claims merely recites functions that the program/code or data/information is intended to accomplish as the invention but fails to recite any limitation that would permit the functionality of the recited program/code or data/information to produce the required concrete and tangible result. Therefore, one of ordinary skill at the time the invention was made would recognize the recited functional language of the claims as being non functional descriptive material/data/information upon which patentability can not be based, "Cf. In re GULACK, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983) (when descriptive material is not functionally related to the substrate, the descriptive material will not distinguish the invention from the prior art in terms of patentability). Common situations involving nonfunctional descriptive material are: ... - a computer that differs from the prior art solely with respect to nonfunctional descriptive material that cannot alter how the machine functions (i.e., the descriptive material does not reconfigure the computer), or - a process that differs from the prior art only with respect to nonfunctional descriptive material that cannot alter how the process steps are to be performed to achieve the utility of the invention. Thus, if the prior art suggests storing a song on a disk, merely choosing a particular song to store on the disk would be presumed to be

well within the level of ordinary skill in the art at the time the invention was made. The difference between the prior art and the claimed invention is simply a rearrangement of nonfunctional descriptive material." MPEP 2106, 2106.01 & 2106.02.

4.2.3 In view of the above characterization of claims 18 & 38 it can clearly be seen that, as these claims would be reasonably interpreted by one of ordinary skill at the time the invention was made, these claim(s) merely convey to one of ordinary skill at the time the invention was made a description of an invention that merely sets forth the concept of data/information that is a program/code/instructions as non functional data/information that is contained on memory/manufacture/article, where the recited memory/manufacture/article alone, that is by itself, can not realize the disclosed and claimed utility as set forth by applicant.

4.2.4 Such a claimed invention as recited in the claims, as would be recognized by one of ordinary skill at the time the invention was made, as describing a claimed invention that is not operative to achieve the disclosed or claimed practical and substantial utility, as applicant has set forth and has been held by the court to be non-statutory subject matter, see In re SARKAR, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978).

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.1 Claims 1, 3-16, 18-21 & 23-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5.1.1 In regard to claims 1, 3-16, 18-21 & 23-38 and in particular to claims 1, 18, 19, 37 & 38, it is noted one of ordinary skill at the time the invention was made would be confused by how the claimed machine/process/article could provide the useful and beneficial result of producing a more accurate control program for a robot to perform a function because the invention recited in the claims fails to positively recite that all of: (A) the "measuring points"; and (B) the "characteristic parameters of the geometric model"; and (C) the "corresponding points on the geometric model" are related in any way to the recited "defined positions of the object" that as recited are to be adjusted and used by the control program of the robot to control the robot so that the resultant data/information that is produced by the claimed invention would provide the

meaningful result of producing an useful and beneficial more accurate control program for a robot to perform a function.

5.2 Claims not explicitly mentioned above include the above noted defect(s) because the unmentioned claims are depend either directly or indirectly from one or more of the above noted claim(s).

6. The following is a statement of reasons for the indication of allowable subject matter over the prior art:

A) the prior art, for example:

(1) Okada et al (4,670,849) discloses a machine/process in which the control program for a machine/process is modified to increase the accuracy of a machine/process by removing positional errors. To remove the positional errors, the machine/process is commanded to move to a number of designated measurement positions/locations. At each measurement position/location, the position of the machine relative to the co-ordinate system (CO1) of the machine/process for each measurement point are determined and recorded. Further, during each measurement the absolute co-ordinates of the machine relative to a co-ordinate system (CO2) are also determined and recorded. Next, a positional error for each measurement position/location is determined based on a comparison of the acquired positional measurements for both co-ordinate systems CO1 and CO2. Finally, the designated commanded position/location of the machine/process that is contained in the control program is modified based on the determined positional error so that the machine/process may be controlled more accurately to designated positions/locations.

(2) Graham et al (6,256,546) discloses a computer implemented process/machine that under the control of an operating program stored in a computer accessible storage device provides the function of improving the processing of work pieces, that is objects, by an industrial robot in which the control program for a machine/process is modified to increase the accuracy of a machine/process by removing positional errors. To remove the positional errors, the machine/process through the use of a surface scanning program is commanded

to sequentially move to a number of designated measurement positions/locations on an object relative to the co-ordinate system of the machine/process while measuring and recording positional measurements. Next, for each measurement position/location the measurement position/location and it's associated co-ordinates are correlated to a model of the object by mapping each measure position to the corresponding position/location on the nominal model of the object. After performing this mapping, then the positional error/deviation between the co-ordinates of each measurement position/location and the corresponding position/location on the model is determined and optimized. Finally, each of the designated positions of the machine/process that are contained in the control program for the machine/process is modified based on the determined positional error/deviation so that the machine/process may be controlled more accurately to designated positions/locations. It is noted that the combination of the operating program that is stored with in the memory of the machine/process of Graham et al ('546) and controls the operation of the machine/process of Graham et al ('546) would be recognized by one of ordinary skill at the time the invention was made as an implementation of the above teachings on a computer readable media.

B) however, the prior art does not fairly teach or suggest in regard to claims 1, 18, 19, 37 & 38 a process/article/machine in which a more accurate control program for a robot is produced by providing structures in claims 18, 19 & 38 and acts in claims 1 & 37 that perform the following function of:

(1) using a number of points on a geometric model of an object to determine: (a) a plurality of object characteristics parameters that are used to identify the orientation and position of the geometric model relative to the co-ordinate system of the robot; and (b) the deviation between the point on the geometric model and the corresponding measurement point relative to the co-ordinate system of the robot, where the determined deviation is used to produce a more accurate control program for the robot by adjusting/correcting the co-

ordinates of a defined position on a\the object relative to the co-ordinate system of the robot.

Claims 3-16, 20, 21, 22 & 23-36 are allowable over the prior art for the same reason.

7. Response to applicant's arguments.

7.1 The objections and rejection that have not been repeated here in have been over come by applicant's last response.

7.2 In regard to the rejection of claims 1, 3-16, 18, 37 & 38 under 35 U.S.C. 101, applicant's arguments are deem non persuasive and this/these rejections has/have been maintained in view of the respective modified rejection as set forth above and the following considerations.

7.2.1 In regard to applicant's arguments regarding the nature of the subject matter recited as the invention and the functions/acts that as recited in the claims are performed by the instant invention. It would appear that applicant has not considered what the knowledge of one of ordinary skill would be regarding the claimed invention, how one of ordinary skill would interpret the limitations of the claimed invention, and has read constraining limitation from the disclosure into the claims, which is a practice that the Court has instructed the Patent Office not to do, see In re PRATER AND WEI, 162 USPQ 541 at 551 (CCPA 1969).

7.2.2 In regard to the rejection of claims 1, 3-16, 18, 37 & 38 under 35 U.S.C. 101, as set forth above, it is noted that:

A) unclaimed useful applications/utilities of claimed subject mater as described in the written description may not be imparted to the claimed invention from the disclosure, see In re PRATER AND WEI, 162 USPQ 541 at 551 (CCPA 1969); and

B) although there is a large amount of subject matter, that may be patentable as a machine, process, composition of matter or manufacture under 35 U.S.C. 101, the Court has recognized that:

(1) there are some types of subject matter that is excluded from being proper subject matter for patent protection under 35 U.S.C. 101, such as laws of nature, physical phenomena, and abstract ideas, see DIAMOND v. DIEHR AND LUTTON, 209 USPQ 1 at 8 (US SupCT, 1981); and

(2) even the subject matter that is excluded from patent protection under 35 U.S.C. 101 may become proper subject matter for a patent under 35 U.S.C.

101 where the claimed invention that goes beyond merely the manipulation of excluded subject matter, see idea GOTTSCHALK v BENSON ET AL, 175 USPQ 673 (US SupCT, 1972) and PARKER v FLOOK, 198 USPQ 193 (US SupCT, 1978), at pages 7-8; and

C) the Court has provided some guidance in determining if acclaimed invention goes beyond the mere manipulation of excluded subject matter by recognizing that for a claimed invention to go beyond the mere manipulation of excluded subject matter and thereby to become proper subject matter for patent protection under 35 U.S.C. 101, then from the point of view of one of ordinary skill that the time the invention was made the claimed invention must be interpreted as including a positive recitation of a structure or an act/function that would be interpreted by one of ordinary skill as either:

(1) providing a credible concrete and tangible substantial useful application of the results of the claimed manipulation of excluded subject matter, see In re WARMERDAM, 31 USPQ2d 1745 at 1758-1759 (CAFC, 1994) and STATE STREET BANK AND TRUST CO. v SIGNATURE FINANCIAL GROUP INC., 38 USPQ2d 1596 at 1602 (CAFC 1998); or

(2) going beyond merely reciting a particular field of use for the claimed manipulation of excluded subject matter, see DIAMOND v. DIEHR AND LUTTON, 209 USPQ 1 at 11 (US SupCT, 1981); or

(3) going beyond merely reciting insignificant activity after the manipulation of excluded subject matter, see DIAMOND v. DIEHR AND LUTTON, 209 USPQ 1 at 11 (US SupCT, 1981); or

(4) going beyond merely reciting insignificant activity that as claimed would only provide data/information to the claimed manipulation of excluded subject matter, see In re RICHMAN, 195 USPQ 340 at 344 (CCPA 1977);

Where it is noted that the Court has deemed the displaying of the results of a manipulation of excluded subject matter as being an insignificant activity after the manipulation, note claim 5 which displayed the results of a manipulation of excluded subject matter was held to be non-statutory, see In re ABELE and MARSHALL, 214 USPQ 682 at 688 (CCPA 1982); and

D) the Courts have further recognized that the above guidance regarding proper subject matter for patent protection under 35 U.S.C. 101 applies to both process and machine claims alike, see In re MAUCORPS, 203 USPQ 812 @ 815-816 (CCPA 1979) and In re JOHNSON, 589 F.2d 1070, 1077, 200 USPQ 199, 206 (CCPA 1978) and In re FREEMAN, 573 F.2d at 1247, 197 USPQ at 472.".

E) where computer readable media are concerned the Courts and the Patent Office have had the flowing additional comments

(1) that data structures by definition are not programs, "(The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).)", see also MPEP 2106, 2106.01 & 2106.02;

(2) concerning statutory subject matter, as set forth in the following quote, the computer program running on a computer makes the computer a different machine, see In re ALAPPAT, 31 USPQ2d 1545 at 1558 (CAFC 1994), "We have held that such programming creates a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.";

(3) a computer program is not a statutory process because the program alone can not bring about a useful result with out being claim as being executed by a computer, see MPEP 2106, 2106.01 & 2106.02 and note that nonfunctional data stored in a memory device is non-statutory, see "When nonfunctional descriptive material is recorded on some computer-readable medium, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make it statutory. Such a result would exalt form over substance. In re SARKAR, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978)"; and

(4) that a computer readable media containing data/information that would cause a useful function to be performed when claimed in conduction with a computer in such a manner that the functionality recited as the invention can be realized are statutory, see MPEP 2106, 2106.01 & 2106.02 and In re BEAUREGARD, 35 USPQ2d 1383 (CAFC 1995), and note the corresponding claims of Beauregard et al (5,7010,578).

7.2.3 Since:

A) applicant's arguments have not provided any evidence, beyond unsupported ascertains regarding the interpretation of unclaimed limitations, that would tend to support a conclusion that invention as recited in claims 1, 3-16, 18, 37 & 38 would be interpreted by one of ordinary skill at the time the invention was made as positively reciting anything more than acts/structures that perform the acts/functions of gathering and processing data/information with a concrete and tangible practical application of the results of the recited processing; and

B) as set forth above by the examiner in the rejection of claims 1, 3-16, 18, 37 & 38, this/these claim(s) would be interpreted by one of ordinary skill at the time the invention was made as merely conveying a positive recitation of an invention that does nothing more than perform the acts/functions of gathering and processing data/information with out a concrete and tangible practical application of the results of the recited processing, because the claims lack a positive recitation that requires that the resultant data/information of the recited processing is used/applied in a concrete and tangible manner that is external to the invention that is currently recited in claims 1, 3-16, 18, 37 & 38;

these claims are deemed to be solely directed to the excluded subject matter of the "abstract idea" of collecting and manipulating data/information that would preempt any and all uses of the recited processing.

7.2.4 Although it is noted that claims 19-21 & 23-36 recite similar subject matter as a machine, it is noted that the following language of claim 19, note:

A) "an industrial robot, wherein the real object and the robot are arranged to that it is possible to, by means of the robot, generate a plurality of measuring points

corresponding to different points on the surface of the real object expressed in a coordinate system associated with the robot", would be interpreted by one of ordinary skill at the time the invention was made as being directed to a structure that goes beyond merely data gathering because the robot must be moved while collecting the data; and

B) "a control system comprising an adjusting module arranged to receive the deviation from the calculating module and to adjust said defined positions based on said calculated deviations and direct movement of the robot to the adjusted defined positions", would be interpreted by one of ordinary skill at the time the invention was made as being directed to a structure that goes beyond merely data processing because the results of the claimed data processing are applied in a concrete and tangible manner to provide a useful and beneficial application when the robot is controlled to move to the "adjusted defined positions".

7.2.5 Since, applicant's arguments have not provided any evidence, beyond unsupported ascertains regarding the interpretation of unclaimed limitations, that would tend to support a conclusion that invention as recited in claims 18 & 38 would be interpreted by one of ordinary skill at the time the invention was made as positively reciting anything more than non-functional descriptive material stored on a "computer readable media" that can not operatively and usefully perform the describes acts of gathering and processing data/information, these claims are deemed to be direct to non-statutory subject matter.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward R. Cosimano whose telephone number is 571-272-0571. The examiner can normally be reached on 571-272-0571 from 7:30am to 4:00pm (Eastern time).

8.1 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow, can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8.2 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ERC
01/16/2007

Edward Cosimano
Primary Examiner